

DERWENT-ACC-NO: 1999-153313

DERWENT-WEEK: 200063

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TITLE: Diagnosis, treatment and prevention of diabetes and other autoimmune diseases - using antibodies reactive with anti-T-cell receptor Vbeta antibody

INVENTOR: MATOSSIAN-ROGERS, A

PATENT-ASSIGNEE: MATOSSIAN-ROGERS A[MATOI]

PRIORITY-DATA: 1998GB-0010676 (May 18, 1998) , 1997GB-0015281
(July 21, 1997)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | |
|---------------------------|-------------------|----------|-----|
| PAGES MAIN-IPC | | | |
| CN 1264426 A C12N 015/09 | August 23, 2000 | N/A | 000 |
| WO 9905175 A2 C07K 016/00 | February 4, 1999 | E | 072 |
| AU 9884517 A C07K 016/00 | February 16, 1999 | N/A | 000 |
| EP 998556 A2 C12N 015/09 | May 10, 2000 | E | 000 |
| BR 9810118 A C07K 016/00 | August 8, 2000 | N/A | 000 |

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI G B GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW A L AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION-DATA:

| PUB-NO | APPL-DESCRIPTOR | APPL-NO |
|----------------------------|-----------------|----------------|
| APPL-DATE | | |
| CN 1264426A July 20, 1998 | N/A | 1998CN-0807380 |
| WO 9905175A2 July 20, 1998 | N/A | 1998WO-GB02151 |

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|---------------|----------|----------------|
| AU 9884517A | N/A | 1998AU-0084517 |
| July 20, 1998 | | |
| AU 9884517A | Based on | WO 9905175 |
| N/A | | |
| EP 998556A2 | N/A | 1998EP-0935160 |
| July 20, 1998 | | |
| EP 998556A2 | N/A | 1998WO-GB02151 |
| July 20, 1998 | | |
| EP 998556A2 | Based on | WO 9905175 |
| N/A | | |
| BR 9810118A | N/A | 1998BR-0010118 |
| July 20, 1998 | | |
| BR 9810118A | N/A | 1998WO-GB02151 |
| July 20, 1998 | | |
| BR 9810118A | Based on | WO 9905175 |
| N/A | | |

INT-CL_(IPC): A61K038/16; A61K039/395 ; C07K014/435 ;
 C07K016/00 ;
 C07K016/42 ; C12N015/09

RELATED-ACC-NO: 1999-073525

ABSTRACTED-PUB-NO: WO 9905175A

BASIC-ABSTRACT: Use as a pharmaceutical or diagnostic reagent of one of the following is new: (a) mono- or poly-clonal antibodies (Ab1), or equivalent ligand, reactive with an anti-TCR (T-cell receptor) V beta antibody (Ab2); (b) (oligo- or poly-)peptide or protein (I), bound to Ab1, or its equivalent ligand, that is not Ab2; (c) genomic DNA, cDNA or RNA (II) encoding Ab1, equivalent ligand or (I); (d) bacteriophage clone, plasmid or viral vector containing (II), designated (IIa), that encodes the ESRP1 protein (endocrine secretion regulatory protein). Also new are (1) any (I), designated (Ia), containing the ESRP1 sequence (of 410 amino acids, given in the specification); (2) any nucleic acid (IIa) encoding ESRP1; (3) bacteriophage clone, plasmid or viral vector containing (IIa); (4) host cells stably transfected or transformed with a plasmid or vector of (3).

USE - Ab1, (I) or (Ia) are used to treat or prevent (non-)insulin-dependent diabetes mellitus, (non-)organ-specific autoimmune diseases,

cardiovascular diseases, cachexia, cancer and generally any condition associated with anti-phospholipid (PL) antibodies, hyperinsulinaemia and insulin resistance. Ab1, and equivalent ligands, are also used to detect and quantify natural autoantibodies (Ab3) in blood, plasma and serum, for determining susceptibility to autoimmune disease and for prognosis of disease or treatment efficiency. The method is based on the idea that Ab3 are responsible for autoimmune diseases, e.g. in the case of diabetes they bind to proteins on alpha -cells, resulting in dysregulation of insulin secretion and then beta -cell death.

CHOSEN-DRAWING: Dwg. 0/7

TITLE-TERMS:

DIAGNOSE TREAT PREVENT DIABETES DISEASE ANTIBODY REACT ANTI CELL
RECEPTOR
ANTIBODY

DERWENT-CLASS: B04 D16 S03

CPI-CODES: B04-B04D4; B04-B04D5; B04-E02; B04-E03; B04-E08;
B04-F0100E;
B04-F1100E; B04-G01; B04-G21; B04-G22; B04-H01; B04-N04;
B11-C07A; B12-K04A;
B14-E11; B14-F01; B14-F02; B14-G02D; B14-H01; B14-S04; D05-H09;
D05-H10;
D05-H11; D05-H12A; D05-H12E; D05-H14; D05-H17A2;

CHEMICAL-CODES:

Chemical Indexing M1 *01*
Fragmentation Code
M423 M710 M903 P433 P520 P522 P631 P633 P816 P831
Q233 V600 V611

Chemical Indexing M1 *02*

Fragmentation Code
M423 M710 M903 P433 P520 P522 P631 P633 P816 Q233
V752 V901 V902

Chemical Indexing M1 *03*

Fragmentation Code
M423 M710 M903 Q233 V753

Chemical Indexing M1 *04*

Fragmentation Code
M423 M710 M903 N135 Q233 V500 V540 V560 V754

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1999-045200

RESULT 1
X22754
ID X22754 standard; DNA; 1231 BP.
XX
AC X22754;
XX
DT 07-JUN-1999 (first entry)
XX
DE Human ESRP1 DNA.
XX
KW ESRP1; treatment; prevention; non-insulin-dependent diabetes mellitus;
KW non-organ-specific autoimmune disease; cardiovascular disease; cancer;
KW cachexia; anti-phospholipid antibody; hyperinsulinaemia; T-cell receptor;
KW insulin resistance; monoclonal; polyclonal; anti-TCR; V beta antibody;
KW detection; autoantibody; blood; plasma; serum; autoimmune disease; human;
KW alpha-cell; dysregulation; insulin secretion; beta-cell death; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 1..1231
FT /*tag= a
FT /product= "ESRP1"
FT /partial
FT /codon_start= 2
XX
PN WO9905175-A2.
XX
PD 04-FEB-1999.
XX
PF 20-JUL-1998; 98WO-GB02151.
XX
PR 18-MAY-1998; 98GB-0010676.
PR 21-JUL-1997; 97GB-0015281.
XX
PA (MATO/) MATOSSIAN-ROGERS A.
XX
PI Matossian-Rogers A;
XX
DR WPI; 1999-153313/13.
DR P-PSDB; W93254.
XX
PT Diagnosis, treatment and prevention of diabetes and other autoimmune
PT diseases - using antibodies reactive with anti-T-cell receptor Vbeta
PT antibody
XX
PS Disclosure; Fig 6; 72pp; English.
XX
CC This sequence encodes the human ESRP1 protein. This protein or
CC antibody fragments generated from it are used to treat or prevent
CC (non-)insulin-dependent diabetes mellitus, (non-)organ-specific
CC autoimmune diseases, cardiovascular diseases, cachexia, cancer and
CC generally any condition associated with anti-phospholipid antibodies,
CC hyperinsulinaemia and insulin resistance. Mono- or poly-clonal antibodies
CC and equivalent ligands reactive with an anti-TCR (T-cell receptor) V beta
CC antibody are also used to detect and quantify natural autoantibodies in
CC blood, plasma and serum, for determining susceptibility to autoimmune

CC disease and for prognosis of disease or treatment efficiency. The method
CC is based on the idea that autoantibodies are responsible for autoimmune
CC diseases, e.g. in the case of diabetes they bind to proteins on
CC alpha-cells, resulting in dysregulation of insulin secretion and then
CC beta-cell death.

xx

SQ Sequence 1231 BP; 287 A; 388 C; 362 G; 194 T; 0 other;

Query Match 41.2%; Score 1088.8; DB 20; Length 1231;
Best Local Similarity 94.9%; Pred. No. 1.4e-224;
Matches 1198; Conservative 0; Mismatches 12; Indels 52; Gaps 5;

Qy 1479 cccgttgcaccgtccgggtgcgggtgcctggcttgctgccaccaacctcta 1538
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Qy 1599 tgagaaatccgtgcgagaccaggccttcaaggcatttcggagcttcctgtccaaatttgg 1658

Qy 1659 gtctgtgtcgaggaccgacccagctggaggaagtggagaaggatgtccatgcagcctc 1718

Db 310 gtctgtgtcgaggaccggaccctggaggaaagtggagaaggatgtccatgcggc 369
Qy 1719 cagccctggcatgggaggagccgcagctagctggcaggctggccgtgaccgggtctc 1778

Db 370 cagccctggcatggaggagccgcagctagctggcaggctggccgtgaccgggtctc 429
Qy 1779 ctcaactcacccaaggctgatccgttcgcacccaaccactgccccaacagaaaccaacat 1838

Db 430 ctcactcacctccaagctgatccgtcgacccaaaccactgccccaaacagaaaccaacat 489
Ov 1839 tcccccaaagacccacgcctgaaggagttctqcccacqccccccatgttctgccac 1898

Db 547 ccctacaacctcaggccactgggagacgcaggaggacaaggacacagcagaagacag 606

Db 607 cagcactgctgacagatgggacgacgaagactggggcagcctggagcaggaggccgagtc 666

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